

1. An apparatus for establishing a connection in an ATM network comprising:
 - a controller which attempts to restore the original quality of service of the connection with the circuit, which determines the quality of service of the ATM network and which automatically adjusts the quality of service requirements associated with the connection to be formed in the ATM network in accordance with the quality of service of the ATM network; and
 - a memory which stores a plurality of quality of service requirements, said memory connected to the controller to obtain different quality of service requirements from the controller to automatically relate the quality of service requirements with different quality of service requirements.
2. An apparatus as described in claim 1, wherein the controller automatically selectively relates the quality of service requirements by choosing a different quality of service requirement.
3. An apparatus as described in claim 1, wherein the apparatus includes an index having the different quality of service requirements.

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a memory which stores a plurality of different quality of service requirements, said memory connected to the controller for the controller to obtain different quality of service requirements for the controller to automatically relax the original quality of service requirements with different quality of service requirements.

2. An apparatus as described in Claim 1 wherein the controller automatically selectively relaxes the quality of service requirements by choosing a different quality of service requirement.

3. An apparatus as described in Claim 2 wherein the memory includes an index having the different quality of service

requirements ordered in terms of priority for the controller to choose when the controller relaxes the original quality of service requirements and attempts to establish the circuit.

4. An apparatus as described in Claim 3 wherein the controller places a flag in the memory for the circuit when the circuit is established with relaxed quality of service requirements.

5. An apparatus as described in Claim 4 wherein the controller periodically reexamines the ATM network resources and attempts to establish the circuit with the original quality of service requirements in the ATM network.

6. An apparatus as described in Claim 5 wherein when the controller attempts to establish the circuit with the original quality of service requirements, if the original quality of service requirements of the circuit cannot be satisfied, the controller attempts to establish the circuit with the quality of service requirements in the index according to their priority until quality of service requirements with a higher priority than the quality of service requirement that the circuit is currently established under in the network is found.

7. An apparatus as described in Claim 6 wherein the circuit is an SPVx circuit.

8. A method for establishing circuits in an ATM network comprising the steps of:

attempting to form a connection in an ATM network satisfying original quality of service requirements;

rejecting the formation of the circuit due to resources of the ATM network not being available to meet the original quality of service requirements of the circuit;

relaxing automatically the quality of service requirements of the circuit; and

creating the circuit in the ATM network subject to the relaxed quality of service requirements.

9. A method as described in Claim 8 wherein the relaxing step includes the step of relaxing automatically and selectively the original quality of service requirements by choosing different quality of service requirements than the original quality of service requirements.

10. A method as described in Claim 9 wherein the relaxing automatically and selectively step includes the step of choosing the different quality of service requirements by a controller from an index having a plurality of different quality of

service requirements stored in a memory connected to the controller.

11. A method as described in Claim 10 including before the attempting step, there is the step of placing the different quality of service requirements in the index, each with a priority relative to each other and the original quality of service requirements.

12. A method as described in Claim 11 including after the recreating step, there is the step of placing a flag in the memory by the controller corresponding with the circuit that is established with relaxed quality of service requirements.

13. A method as described in Claim 12 including after the creating step, there are the steps of re-examining the ATM network resources and attempting to establish the circuit with the original quality of service requirements in the ATM network.

14. A method as described in Claim 13 including after the attempting to establish step, there is the step of attempting to establish the circuit with the different quality of service requirements in the index according to their priority until different quality of service requirements with a higher priority than the quality of service requirements that the circuit is currently established under in the network is found.

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